

Search Plan and Results

Question

[What are the effects of maternal dietary intake of n-3 fatty acids from seafood on breast milk composition and health outcomes in infants? \(DGAC 2010\)](#)

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Date Searched

08/20/2009; 08/24/2009; 10/08/2009

Inclusion Criteria

Subjects/Population

- *Age/Life stage:* Pregnant or lactating women and infants
- *Health status:* Healthy pregnant or lactating women and term infants
- *Nutrition related problem/Condition:* Dietary intake of DHA.

Search Criteria

- *Study design preferences:* RCT or clinical controlled studies, large non-randomized observational studies, meta-analysis and systematic reviews. Feeding period must be greater than four weeks
- *Size of study groups:* The sample size must be more than 10 subjects for each study group. For example, this would include 10 patients in the intervention group and 10 patients in the control or comparison group
- *Study drop out rate:* Less than 20%; preference for smaller dropout rates
- *Year range:* 2000 to present
- *Languages:* Limited to articles in English
- *Other:* Article must be published in peer-reviewed journal.

Exclusion Criteria

Subjects/Population

- *Age:* Non-pregnant or lactating adults, children and adolescents
- *Setting:* Inpatients
- *Health status:* Medical treatment, therapy, diseased subjects, malnourished or third-world populations
- *Nutrition related problem/condition:* Supplemental DHA
- *Size of study groups:* Sample sizes less than 10
- *Study designs:* Cross-sectional; feeding periods less than four weeks
- *Study dropout rate:* If the dropout rate in a study is 20% or greater
- *Year range:* Prior to January 2000
- *Authorship:* Studies by same author with similar in content and health outcome

measurements

- *Languages:* Articles not in English
- *Other:* Animal studies; abstracts or presentations.

Search Terms: Search Vocabulary

- “DHA” OR “FISH OIL” OR “N-3 LONG CHAIN POLYUNSATURATED FATTY ACID (LCPUFA)” AND “PREGNANCY” AND “HEALTH OUTCOMES” AND “INFANT”
- “DHA” OR “FISH OIL” OR “N-3 LONG CHAIN POLYUNSATURATED FATTY ACID (LCPUFA)” AND “PREGNANCY” AND “DURATION”
- “DHA” OR “FISH OIL” OR “N-3 LONG CHAIN POLYUNSATURATED FATTY ACID (LCPUFA)” AND “PREGNANCY” AND “PREMATURE BIRTH”
- “DHA” OR “FISH OIL” OR “N-3 LONG CHAIN POLYUNSATURATED FATTY ACID (LCPUFA)” AND “PREGNANCY” AND “INTRAUTERINE GROWTH RETARDATION”
- “DHA” OR “FISH OIL” OR “N-3 LONG CHAIN POLYUNSATURATED FATTY ACID (LCPUFA)” AND “PREGNANCY” AND “INFANT” AND “NEUROLOGICAL”
- “DHA” OR “FISH OIL” OR “N-3 LONG CHAIN POLYUNSATURATED FATTY ACID (LCPUFA)” AND “PREGNANCY” AND “INFANT” AND “COGNITIVE”
- “DHA” OR “FISH OIL” OR “N-3 LONG CHAIN POLYUNSATURATED FATTY ACID (LCPUFA)” AND “PREGNANCY” AND “INFANT” AND “VISION”
- “DHA” OR “FISH OIL” OR “N-3 LONG CHAIN POLYUNSATURATED FATTY ACID (LCPUFA)” AND “LACTATION” OR “BREASTFEEDING” AND “INFANT” AND “NEUROLOGICAL”
- “DHA” OR “FISH OIL” OR “N-3 LONG CHAIN POLYUNSATURATED FATTY ACID (LCPUFA)” AND “LACTATION” OR “BREASTFEEDING” AND “INFANT” AND “COGNITIVE”
- “DHA” OR “FISH OIL” OR “N-3 LONG CHAIN POLYUNSATURATED FATTY ACID (LCPUFA)” AND “LACTATION” OR “BREASTFEEDING” AND “INFANT” AND “VISION”
- “DHA” OR “FISH OIL” OR “N-3 LONG CHAIN POLYUNSATURATED FATTY ACID (LCPUFA)” AND “INFANT FORMULA” AND “INFANT” AND “NEUROLOGICAL”
- “DHA” OR “FISH OIL” OR “N-3 LONG CHAIN POLYUNSATURATED FATTY ACID (LCPUFA)” AND “INFANT FORMULA” AND “INFANT” AND “COGNITIVE”
- “DHA” OR “FISH OIL” OR “N-3 LONG CHAIN POLYUNSATURATED FATTY ACID (LCPUFA)” AND “INFANT FORMULA” AND “INFANT” AND “VISION”

Electronic Databases

Total hits from all electronic database searches: 198

Total articles identified to review from electronic databases: 50

Articles Identified Via Handsearch or Other Means

Hand Search

Summary of Articles Identified to Review

Number of Primary Articles Identified: 8

Number of Review Articles Identified: 1

Total Number of Articles Identified: 9

Number of Articles Reviewed but Excluded: 41

List of Articles Included for Evidence Analysis

Systematic Reviews/Meta-Analysis

Brenna JT, B. Varamini, R.G. Jensen, D.A. Diersen-Schade, J.A. Boettcher and L.M. Arterburn. Docosahexaenoic and arachidonic acid concentrations in human breast milk worldwide. *Am J Clin Nutr.* 2007; 85: 1, 457–1, 464. [View Record in Scopus](#)

Primary Articles

Colombo J, Kannass KN, Shaddy DJ, Kundurthi S, Maikranz JM, Anderson CJ, Blaga OM, Carlson SE. [Maternal DHA and the development of attention in infancy and toddlerhood. Child Dev.](#) 2004 Jul-Aug; 75(4): 1, 254-1, 267. PMID: 15260876.

Drouillet P, Kaminski M, De Lauzon-Guillain B, Forhan A, Ducimetière P, Schweitzer M, Magnin G, Goua V, Thiébaut Georges O, Charles MA. [Association between maternal seafood consumption before pregnancy and fetal growth: Evidence for an association in overweight women. The EDEN mother-child cohort. Paediatr Perinat Epidemiol.](#) 2009 Jan; 23(1): 76-86. PMID: 19228317.

Hibbeln JR, Davis JM, Steer C, Emmett P, Rogers I, Williams C, Golding J. [Maternal seafood consumption in pregnancy and neurodevelopmental outcomes in childhood \(ALSPAC study\): An observational cohort study. Lancet.](#) 2007 Feb 17; 369(9561): 578-585. PMID: 17307104.

Innis SM, Gilley J, Werker J. [Are human milk long-chain polyunsaturated fatty acids related to visual and neural development in breast-fed term infants?](#) *J Pediatr.* 2001 Oct; 139(4): 532-538.

Oken E, Radesky JS, Wright RO, Bellinger DC, Amarasiriwardena CJ, Kleinman KP, Hu H, Gillman MW. [Maternal fish intake during pregnancy, blood mercury levels, and child cognition at age 3 years in a US cohort.](#) *Am J Epidemiol.* 2008 May 15; 167(10): 1, 171-1, 181. Epub 2008 Mar 18. PMID: 18353804.

Oken E, Østerdal ML, Gillman MW, Knudsen VK, Halldorsson TI, Strøm M, Bellinger DC, Hadders-Algra M, Michaelsen KF, Olsen SF. [Associations of maternal fish intake during pregnancy and breastfeeding duration with attainment of developmental milestones in early childhood: a study from the Danish National Birth Cohort.](#) *Am J Clin Nutr.* 2008 Sep; 88(3): 789-796. PMID: 18779297.

Oken E, Wright RO, Kleinman KP, Bellinger D, Amarasiriwardena CJ, Hu H, Rich-Edwards JW, Gillman MW. [Maternal fish consumption, hair mercury, and infant cognition in a U.S. Cohort.](#) *Environ Health Perspect.* 2005 Oct; 113(10): 1, 376-1, 380. PMID: 16203250.

Olsen SF, Østerdal ML, Salvig JD, Kesmodel U, Henriksen TB, Hedegaard M, Secher NJ. [Duration of pregnancy in relation to seafood intake during early and mid pregnancy: Prospective cohort.](#) *Eur J Epidemiol.* 2006; 21(10): 749-758. Epub 2006 Nov 17. PMID: 17111251.

List of Excluded Articles with Reason

Article	Reason for Exclusion
Asserhøj M, Nehammer S, Matthiessen J, Michaelsen KF, Lauritzen L. Maternal fish oil supplementation during lactation may adversely affect long-term blood pressure, energy intake, and physical activity of 7-year-old boys. <i>J Nutr.</i> 2009 Feb; 139(2): 298-304. Epub 2008 Dec 17. PMID: 19091800.	Fish oil with 600mg EPA per day and 800mg DHA per day.
Auestad N, Halter R, Hall RT, Blatter M, Bogle ML, Burks W, Erickson JR, Fitzgerald KM, Dobson V, Innis SM, Singer LT, Montalto MB, Jacobs JR, Qiu W, Bornstein MH. Growth and development in term infants fed long-chain polyunsaturated fatty acids: a double-masked, randomized, parallel, prospective, multivariate study. <i>Pediatrics.</i> 2001 Aug; 108(2): 372-381. PMID: 11483802.	Infant formula.

<p>Birch EE, Garfield S, Castañeda Y, Hugbanks-Wheaton D, Uauy R, Hoffman D. Visual acuity and cognitive outcomes at four years of age in a double-blind, randomized trial of long-chain polyunsaturated fatty acid-supplemented infant formula. <i>Early Hum Dev.</i> 2007 May; 83(5): 279-284. Epub 2007 Jan 18. PMID: 17240089.</p>	<p>Infant formula.</p>
<p>Cheruku SR, Montgomery-Downs HE, Farkas SL, Thoman EB, Lammi-Keefe CJ. Higher maternal plasma docosahexaenoic acid during pregnancy is associated with more mature neonatal sleep-state patterning. <i>Am J Clin Nutr.</i> 2002 Sep; 76(3): 608-613. Erratum in: <i>Am J Clin Nutr.</i> 2003 Dec; 78(6): 1, 227. PMID: 12198007.</p>	<p>Dietary DHA was not assessed, nor was supplement given (low subject number).</p>
<p>Daniels JL, Longnecker MP, Rowland AS, Golding J; ALSPAC Study Team. University of Bristol Institute of Child Health. Fish intake during pregnancy and early cognitive development of offspring. <i>Epidemiology.</i> 2004 Jul; 15(4): 394-402. PMID: 15232398.</p>	<p>No information on DHA.</p>
<p>Dunstan JA, Mitoulas LR, Dixon G, Doherty DA, Hartmann PE, Simmer K, Prescott SL. The effects of fish oil supplementation in pregnancy on breast milk fatty acid composition over the course of lactation: A randomized controlled trial. <i>Pediatr Res.</i> 2007 Dec; 62(6): 689-694. PMID: 17957152.</p>	<p>2.2g per day DHA and 1.1g per day EPA; started at 20 weeks gestation.</p>
<p>Dunstan JA, Simmer K, Dixon G, Prescott SL. Cognitive assessment of children at age 2 1/2 years after maternal fish oil supplementation in pregnancy: A randomised controlled trial. <i>Arch Dis Child Fetal Neonatal Ed.</i> 2008 Jan; 93(1): F45-F50. Epub 2006 Dec 21. PMID: 17185423.</p>	<p>2.2g per day DHA and 1.1g per day EPA; started at 20 weeks gestation.</p>
<p>Eilander A, Hundscheid DC, Osendarp SJ, Transler C, Zock PL. Effects of n-3 long chain polyunsaturated fatty acid supplementation on visual and cognitive development throughout childhood: A review of human studies. <i>Prostaglandins Leukot Essent Fatty Acids.</i> 2007 Apr; 76(4): 189-203. PMID: 17376662.</p>	<p>Supplemental DHA.</p>
<p>Gibson RA, Chen W, Makrides M. Randomized trials with polyunsaturated fatty acid interventions in preterm and term infants: Functional and clinical outcomes. <i>Lipids.</i> 2001 Sep; 36(9): 873-883. PMID: 11724459.</p>	<p>Infant formula.</p>

<p>Helland IB, Saugstad OD, Saarem K, Van Houwelingen AC, Nylander G, Drevon CA. <u>Supplementation of n-3 fatty acids during pregnancy and lactation reduces maternal plasma lipid levels and provides DHA to the infants.</u> <i>J Matern Fetal Neonatal Med.</i> 2006 Jul; 19(7): 397-406. PMID: 16923694.</p>	<p>10ml cod liver oil or corn oil per day; cod liver oil = 1, 183mg per 10ml DHA, 803mg per 10ml EPA; total 2, 494mg per 10ml n-3 PUFAAs started 18 weeks gestation; term infants.</p>
<p>Helland IB, Saugstad OD, Smith L, Saarem K, Solvoll K, Ganesh T, Drevon CA. <u>Similar effects on infants of n-3 and n-6 fatty acids supplementation to pregnant and lactating women.</u> <i>Pediatrics.</i> 2001 Nov; 108(5): E82. PMID: 11694666.</p>	<p>10ml cod liver oil or corn oil per day; cod liver oil = 1, 183mg per 10ml DHA, 803mg per 10ml EPA; total 2, 494mg per 10ml n-3 PUFAAs started 18 weeks gestation; term infants.</p>
<p>Helland IB, Smith L, Blomén B, Saarem K, Saugstad OD, Drevon CA. <u>Effect of supplementing pregnant and lactating mothers with n-3 very-long-chain fatty acids on children's IQ and body mass index at 7 years of age.</u> <i>Pediatrics.</i> 2008 Aug; 122(2): e472-e479. PMID: 18676533.</p>	<p>10ml cod liver oil or corn oil per day; cod liver oil = 1, 183mg per 10ml DHA, 803mg per 10ml EPA; total 2, 494mg per 10ml n-3 PUFAAs started 18 weeks gestation; term infants.</p>
<p>Helland IB, Smith L, Saarem K, Saugstad OD, Drevon CA. <u>Maternal supplementation with very-long-chain n-3 fatty acids during pregnancy and lactation augments children's IQ at 4 years of age.</u> <i>Pediatrics.</i> 2003 Jan; 111(1):e39-44. PMID: 12509593</p>	<p>10ml cod liver oil or corn oil per day; cod liver oil = 1, 183mg per 10ml DHA, 803mg per 10ml EPA; total 2, 494mg per 10ml n-3 PUFAAs started 18 weeks gestation; term infants.</p>
<p>Hoffman DR, Boettcher JA, Diersen-Schade DA. Toward optimizing vision and cognition in term infants by dietary docosahexaenoic and arachidonic acid supplementation: A review of randomized controlled trials. <i>Prostaglandins, Leukotrienes and Essential Fatty Acids.</i> 2009; doi:10.1016/j.plefa.2009.05.003.</p>	<p>Infant formula.</p>
<p>Horvath A, Koletzko B, Szajewska H. Effect of supplementation of women in high-risk pregnancies with long-chain polyunsaturated fatty acids on pregnancy outcomes and growth measures at birth: A meta-analysis of randomized controlled trials, <i>Br. J. Nutr.</i> 2007; 98 253–259.</p>	<p>Supplemental DHA.</p>

<p>Innis SM, Adamkin DH, Hall RT, Kalhan SC, Lair C, Lim M, Stevens DC, Twist PF, Diersen-Schade DA, Harris CL, Merkel KL, Hansen JW. Docosahexaenoic acid and arachidonic acid enhance growth with no adverse effects in preterm infants fed formula. <i>J Pediatr</i>. 2002 May; 140(5): 547-554. PMID: 12032520.</p>	<p>Infant formula.</p>
<p>Innis SM, Friesen RW. Essential n-3 fatty acids in pregnant women and early visual acuity maturation in term infants. <i>Am J Clin Nutr</i>. 2008 Mar; 87(3): 548-557. PMID: 18326591.</p>	<p>400mg per day (Algal oil capsule/Martek); started at 16 weeks gestation; term infants.</p>
<p>Jensen CL, Maude M, Anderson RE, Heird WC. Effect of docosahexaenoic acid supplementation of lactating women on the fatty acid composition of breast milk lipids and maternal and infant plasma phospholipids. <i>Am J Clin Nutr</i>. 2000 Jan; 71(1 Suppl): 292S-299S. PMID: 10617985.</p>	<p>Algae-produced TG with high DHA (less than 230mg DHA per day) or two eggs with high DHA (170mg per day), low EPA or high DHA fish oil (260mg DHA per day) or two regular eggs.</p>
<p>Jensen CL, Voigt RG, Prager TC, Zou YL, Fraley JK, Rozelle JC, Turcich MR, Llorente AM, Anderson RE, Heird WC. Effects of maternal docosahexaenoic acid intake on visual function and neurodevelopment in breastfed term infants. <i>Am J Clin Nutr</i>. 2005 Jul; 82(1): 125-132. PMID: 16002810.</p>	<p>Algal oil capsule, 200mg DHA per day (Martek).</p>
<p>Judge MP, Harel O, Lammi-Keefe CJ. A docosahexaenoic acid-functional food during pregnancy benefits infant visual acuity at four but not six months of age. <i>Lipids</i>. 2007 Mar; 42(2): 117-122. Epub 2007 Jan 19. PMID: 17393217.</p>	<p>300mg DHA functional food cereal bar per day; started at 24 weeks gestation (N=16 DHA; N=14 placebo).</p>
<p>Judge MP, Harel O, Lammi-Keefe CJ. Maternal consumption of a docosahexaenoic acid-containing functional food during pregnancy: benefit for infant performance on problem-solving but not on recognition memory tasks at age 9 mo. <i>Am J Clin Nutr</i>. 2007 Jun; 85(6): 1, 572-1, 577. PMID: 17556695</p>	<p>300mg DHA functional food cereal bar per day; started at 24 weeks gestation (N=16 DHA; N=14 placebo).</p>
<p>Krauss-Etschmann S, Hartl D, Rzehak P, Heinrich J, Shadid R, Del Carmen Ramírez-Tortosa M, Campoy C, Pardillo S, Schendel DJ, Decsi T, Demmelmair H, Koletzko BV; Nutraceuticals for Healthier Life Study Group. Decreased cord blood IL-4, IL-13, and CCR4 and increased TGF-beta levels after fish oil supplementation of pregnant women. <i>J Allergy Clin Immunol</i>. 2008 Feb; 121(2): 464-470.e6. Epub 2007 Nov 5. PMID: 1798041.</p>	<p>Related to allergies.</p>

<p>Larnkjaer A, Christensen JH, Michaelsen KF, Lauritzen L. <u>Maternal fish oil supplementation during lactation does not affect blood pressure, pulse wave velocity, or heart rate variability in 2.5-year-old children.</u> <i>J Nutr.</i> 2006 Jun; 136(6): 1, 539-1, 544. PMID: 16702318.</p>	<p>1g DHA per 0.5g EPA.</p>
<p>Lauritzen L, Christensen JH, Damsgaard CT, Michaelsen KF. <u>The effect of fish oil supplementation on heart rate in healthy Danish infants.</u> <i>Pediatr Res.</i> 2004 Dec; 64(6): 610-614. PMID: 18679165.</p>	<p>Supplementation in late infancy</p>
<p>Lauritzen L, Jørgensen MH, Mikkelsen TB, Skovgaard M, Straarup EM, Olsen SF, Høy CE, Michaelsen KF. <u>Maternal fish oil supplementation in lactation: Effect on visual acuity and n-3 fatty acid content of infant erythrocytes.</u> <i>Lipids.</i> 2004 Mar; 39(3): 195-206. PMID: 15233397.</p>	<p>1g DHA per 0.5g EPA.</p>
<p>Lauritzen L, Jørgensen MH, Olsen SF, Straarup EM, Michaelsen KF. <u>Maternal fish oil supplementation in lactation: Effect on developmental outcome in breast-fed infants.</u> <i>Reprod Nutr Dev.</i> 2005 Sep-Oct; 45(5): 535-547. PMID: 16188206.</p>	<p>1g DHA per 0.5g EPA.</p>
<p>Makrides M, Duley L, Olsen SF. Marine oil, and other prostaglandin precursor, supplementation for pregnancy uncomplicated by pre-eclampsia or intrauterine growth restriction, <i>Cochrane Database Syst Rev</i> 3. 2006; CD003402.</p>	<p>Supplemental DHA.</p>
<p>Makrides M, Gibson RA, McPhee AJ, Collins CT, Davis FG, Doyle LW, Simmer K, Colditz PB, Morris S, Smithers SG, Willson K, Ryan P. Neurodevelopmental outcomes of preterm infants fed high-dose docosahexaenoic acid: a randomized controlled trial, <i>JAMA.</i> 2009; 301(2): 175–182.</p>	<p>Infant formula.</p>
<p>Malcolm CA, McCulloch DL, Montgomery C, Shepherd A, Weaver LT. <u>Maternal docosahexaenoic acid supplementation during pregnancy and visual evoked potential development in term infants: a double blind, prospective, randomised trial.</u> <i>Arch Dis Child Fetal Neonatal Ed.</i> 2003 Sep; 88(5): F383-F390. PMID: 12937042.</p>	<p>200mg per day in fish oil capsules; started at 15 weeks of gestation; only term infants.</p>
<p>McCann JC, Ames BN. <u>Is docosahexaenoic acid, an n-3 long-chain polyunsaturated fatty acid, required for development of normal brain function? An overview of evidence from cognitive and behavioral tests in humans and animals.</u> <i>Am J Clin Nutr.</i> 2005 Aug; 82(2): 281-95. Review. PMID: 16087970.</p>	<p>Includes animal studies.</p>

<p>Myers GJ, Davidson PW, Cox C, Shamlaye CF, Palumbo D, Cernichiari E, Sloane-Reeves J, Wilding GE, Kost J, Huang LS, Clarkson TW. Prenatal methylmercury exposure from ocean fish consumption in the Seychelles child development study. <i>Lancet</i>. 2003 May 17; 361(9, 370): 1, 686-1, 692. PMID: 12767734.</p>	<p>No information on DHA.</p>
<p>Olsen SF, Østerdal ML, Salvig JD, Mortensen LM, Rytter D, Secher NJ, Henriksen TB. Fish oil intake compared with olive oil intake in late pregnancy and asthma in the offspring: 16 years of registry-based follow-up from a randomized controlled trial. <i>Am J Clin Nutr</i>. 2008 Jul; 88(1): 167-175. PMID: 18614738.</p>	<p>Health outcome: Asthma.</p>
<p>Simmer K, Patole SK, Rao SC. Longchain polyunsaturated fatty acid supplementation in infants born at term. <i>Cochrane Database Syst Rev</i>. 2008 Jan 23;(1): CD000376. Review. PMID: 18253974.</p>	<p>Infant formula.</p>
<p>Simmer K, Schulzke SM, Patole S. Longchain polyunsaturated fatty acid supplementation in preterm infants. <i>Cochrane Database Syst Rev</i>. 2008 Jan 23;(1): CD000375. Review. PMID: 18253973.</p>	<p>Infant formula.</p>
<p>Smit EN, Muskiet FA, Boersma ER. Docosahexaenoic acid (DHA) status of breastfed malnourished infants and their mothers in North Pakistan. <i>Adv Exp Med Biol</i>. 2000; 478: 395-396. PMID: 11065099.</p>	<p>Malnourished infants.</p>
<p>Smit EN, Oelen EA, Seerat E, Boersma ER, Muskiet FA. Fish oil supplementation improves docosahexaenoic acid status of malnourished infants. <i>Arch Dis Child</i>. 2000 May; 82(5): 366-369. PMID: 10799425.</p>	<p>Supplementation during childhood.</p>
<p>Smithers LG, Gibson RA, McPhee A, Makrides M. Higher dose of docosahexaenoic acid in the neonatal period improves visual acuity of preterm infants: Results of a randomized controlled trial. <i>Am J Clin Nutr</i>. 2008 Oct; 88(4): 1, 049-1, 056. PMID: 18842793.</p>	<p>Infant formula.</p>
<p>Smuts CM, Borod E, Peeples JM, Carlson SE. High-DHA eggs: Feasibility as a means to enhance circulating DHA in mother and infant. <i>Lipids</i>. 2003 Apr; 38(4): 407-414. PMID: 12848286.</p>	<p>135mg DHA per egg.</p>
<p>Smuts CM, Huang M, Mundy D, Plasse T, Major S, Carlson SE. A randomized trial of docosahexaenoic acid supplementation during the third trimester of pregnancy. <i>Obstet Gynecol</i>. 2003 Mar; 101(3): 469-479. PMID: 12636950.</p>	<p>33 or 133mg DHA from eggs; started from 24th to 28th week of gestation.</p>

<p>Szajewska H, Horvath A, Koletzko B. <u>Effect of n-3 long-chain polyunsaturated fatty acid supplementation of women with low-risk pregnancies on pregnancy outcomes and growth measures at birth: A meta-analysis of randomized controlled trials.</u> <i>Am J Clin Nutr.</i> 2006 Jun; 83(6): 1, 337-1, 344. Review. PMID: 16762945.</p>	<p>Supplemental DHA.</p>
<p>Tofail F, Kabir I, Hamadani JD, Chowdhury F, Yesmin S, Mehreen F, Huda SN. <u>Supplementation of fish-oil and soy-oil during pregnancy and psychomotor development of infants.</u> <i>J Health Popul Nutr.</i> 2006 Mar; 24(1): 48-56. PMID: 16796150.</p>	<p>Fish oil vs. soy oil; 4g per day; during last trimester.</p>